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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/578,361	05/24/2000	Tamara Maes	4409US	4901

7590 03/20/2002  
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EXAMINER

STRZELECKA, TERESA E

ART UNIT	PAPER NUMBER
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1637

DATE MAILED: 03/20/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/578,361

Applicant(s)

MAES ET AL.

Examiner

Teresa E Strzelecka

Art Unit

1637

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 04 March 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_.

3. ☒ Applicant's reply has overcome the following rejection(s): 35 U.S.C. 112, second paragraph, for claim 22.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.Claim(s) objected to: None.Claim(s) rejected: 1-17, 19-22.Claim(s) withdrawn from consideration: None.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

Continuation of 5. does NOT place the application in condition for allowance because: the 35 U.S.C. 103(a) rejection is maintained for claims 1-17, 19-22. See attached response to arguments.

*Response to Arguments*

1. Applicant's arguments filed on March 4, 2002 have been fully considered but they are not persuasive. Applicants argue that there is no reasonable expectation of success to combine Dellaporta and Koes et al., because:

(a) "The non-selective PCR amplification of Dellaporta may decrease the sensitivity of the screening method because some sequences may replicate less efficiently, making the sequences underrepresented in the sample" (page 3, last line; page 4, lines 1, 2). "The screening method of Dellaporta is limited to a simple array because a large number of insertional mutants is required for efficient screening of the pool, wherein a complex three-dimensional array would be unsuitable" (page 4, last sentence of the second paragraph).

(b) "Since Koes et al. uses gene-specific primers, the more complex three-dimensional array may be efficiently screened for mutants. Furthermore, the disclosure of Koes et al. is limited to screening for insertion mutants in **specific** genes of petunia plants because defined insertion sequences are required, ..., while Dellaporta is designed to screen for insertional mutants for **any given locus** in a population.... Therefore, it would not have been evident to one of ordinary skill in the art to combine Dellaporta and Koes et al." (page 4, third paragraph).

(c) No suggestion or motivation exists in Dellaporta or Koes for combining the three-dimensional pooling method with the screening method.

Regarding arguments (a) and (b): there are no limitations in claims 1 or 19 which specify which type of sequences are amplified. In particular, claim 1 and 19 are drawn to amplification of the insertion element flanking sequences "...using at least one primer derived from a sequence of a nucleic acid insertion element". The claims do not specify whether the amplification is non-

Art Unit: 1637

selective (or non-specific), which in this context means amplification of insertion element flanking sequences from any gene, or selective (or specific), which means amplification of insertion element flanking sequences from a chosen gene. For the purpose of the method, whether amplification is selective or not does not make any difference.

Dellaporta teaches using pools of DNA from individuals having insertion junction, since pooling enables identification of the insertion junction without the need to screen all individuals within a population, and gives an example of 2x2 grid (col. 15, lines 62-67). Dellaporta does not teach that any other pooling scheme would be inefficient. The gene specific amplification of Koes et al. is simply a particular embodiment of the method of Dellaporta. Therefore, it is unclear why combining of Dellaporta and Koes et al. could not be viewed as having a reasonable expectation of success.

Regarding argument (c): Both Dellaporta and Koes provide motivation for using pooling (see above for Dellaporta). The motivation provided by Koes et al., which was included in the 35 U.S.C 103 (a) rejection, was that three-dimensional screening was preferable "...because (i) it is less laborious; (ii) it is less liable to detect false positives due to somatic insertions of dTph1, as such sectors rarely expand to all the levels of a plant and, thus, do not produce signals in all three dimensions of the screen (see Fig. 3); and (iii) it directly identifies a single plant. Because of this last feature the plants themselves are not needed once DNA has been isolated." Therefore, Koes et al. provide strong motivation for using three-dimensional pooling, and pooling was suggested by Dellaporta.

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*Kenneth R. Horlick*  
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PRIMARY EXAMINER

3/19/02